UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/433,418	11/04/99	EPSTEIN J	244/629

022249
LYON & LYON LLP
SUITE 4700
633 WEST FIFTH STREET
LOS ANGELES CA 90071-2066

HM12/0328

EXAMINER	
BAHAR,M	

ART UNIT	PAPER NUMBER
1617	6

DATE MAILED: 03/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/433,418	EPSTEIN, JOEL B.	
	Examiner	Art Unit	
	Mojdeh Bahar	1617	

-- The MAILING DATE of this communication appears on the cover sh et with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

Claim Objections

Claims 18 and 36 are objected to because of the following informalities: the use of parentheticals "(AIDS)" in the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3-4, 11-19, 21-22, and 29-36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for azathioprine, does not reasonably provide enablement for "purine analogs" or derivatives of purines or azathioprine broadly. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. The specification does not provide guidance as to what purine or azathioprine analogs would be useful in the methods of treating or preventing autoimmune diseases of the mouth. Moreover, the specification provides azathioprine as its only working example and does not further define characteristics which would render some azathioprine analogs suitable and effective agents in the treatment of autoimmune disease. What makes azathioprine a suitable agent? Is the molecular structure of azathioprine responsible for its activity in the treatment of autoimmune diseases? Would all purines be effective in treating autoimmune diseases of the mouth? Must the structure of the purine closely resemble that of the azathioprine in order for the purine to be useful in treating autimmune diseases of the mouth? One of ordinary skill in the art would not know how

to choose a particular purine which would be effective in the treatment and/or prevention of autoimmune diseases of the mouth.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5-10, and 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "quick" in claims 8 and 26 is a relative term which renders the claim indefinite. The term "quick" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. One of ordinary skill in the art would not be able to determine the time required to satisfy the "quick" element of the claim. What is the rate of dissolution required that would satisfy "quick" dissolution? 5 seconds? 15 seconds? A minute? Twenty minutes?

Claims 9-10 and 27-28 recite the limitation "said effective amount of azathioprine" in the second line of the claims. There is insufficient antecedent basis for this limitation in the claim.

Claims 5-8, 10, 23-26 and 28 recite the limitation "said azathioprine" in 1st lines, 3rd and 4th lines, 1st lines and last line of the claims respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lozada in view of Qi et al. (WO 97/31921).

Lozada teaches a method of treating patients with chronic inflammatory mucocutaneous disease having oral ulcerations including lichen planus, pemphigus vulgaris and bullous pemphigoid comprising administering azathioprine (an immunosuppressive agent), and a steroidal antiinflammatory agent see page 257 first full paragraph, see also MATERIALS AND METHODS. Lozada teaches that Azathioprine is administered from 5 mg every other day to 100 mg/day, see pages 258 Drugs and Results. See also page 259, Col. 2, first full paragraph as well as page 258 Adverse effects.

Lozada does not teach that the composition can be in form of a liquid, solution, suspension, emulsion as well as lotions, ointments and creams. Neither does it teach a method of using the said composition in treating systemic lupus, graft-versus-host disease, lichenoid changes and aphthae associated with HIV and aphthous stomatitis. Lozada et al. does not teach the particular concentration of azathiporine in a solution, nor does it teach the use of the azathioprine solution to rinse the mouth.

Qi et al. (WO 97/31921) teaches a method of administering an immunosuppressive composition in the treatment of autoimmune disorders comprising administering a compound such as azathioprine, page 19, lines 8-17. The composition can be in form of a liquid, solution, suspension, emulsion as well as lotions, ointments and creams, page 14, line 20-25, see also page 15, lines 1-15. Qi et al. (WO 97/31921) also teaches a method of using the said composition in

treating systemic lupus as well as graft-versus-host disease, page 5, line 21-24, page 17, line 15-17. Qi et al. (WO 97/31921) further teaches a method of effecting immunosuppression in a subject generally and a method of inhibiting (i.e. preventing) graft-versus-host disease in particular, page 5, lines 21-24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a liquid, solution, suspension, emulsion as a form of delivery for the composition in the method taught by Lozada. It would have also been obvious to employ the treat any auto-immune disease resulting in ulcerations in the mouth such as oral graft versus host disease, systemic lupus, aphthous stomatitis and lichenoids and aphthae associated with AIDS with a composition comprising azathioprine. It would have also been obvious to use the composition in a mouth wash and rinse the effective area with the said composition. Furthermore, optimization of the concentrations of the mouthwash are obvious.

One of ordinary skill in the art would have been motivated to employ azathioprine to treat other similar ulcerative auto-immune disorders of the mouth because azathioprine is known to be useful in the treatment and prevention of auto-immune diseases of the mouth having oral ulcerations such as lichen planus, pemphigus vulgaris and bullous pemphigoid. Moreover, one of ordinary skill would have been motivated to use a delivery form that comes in contact with the affected area of the mouth because for example, oral liquid, solution, syrup, suspension and emulsion dosage forms known, and topical and oral administration are known for azathioprine composition administration in auto-immune disease treatment. Therefore azathioprine would be reasonably expected to be useful in methods of treating ulcerative auto-immune diseases of the mouth. The optimization of amounts of actives and their concentrations is within the purview of

skilled artisan. Furthermore, rinsing the mouth with a therapeutic composition known to treat auto-immune disorders of the mouth is obvious to the skilled artisan because the ulcerations resulting from the auto-immune disease of the mouth are localized and the optimization of dosage regimens is also obvious as being within the skill of the artisan.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mojdeh Bahar whose telephone number is (703) 305-1007. The examiner can normally be reached on (703) 305-1007 from 8:30 a.m. to 6:30 p.m. Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minna Moezie, J.D., can be reached on (703) 308-4612. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Mojdeh Bahar
Patent Examiner
March 16, 2001

MINNA MOEZIE, J.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600